



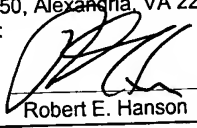
# FULBRIGHT & JAWORSKI L.L.P.

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600 CONGRESS AVENUE, SUITE 2400  
AUSTIN, TEXAS 78701-3271  
WWW.FULBRIGHT.COM

RHANSON@FULBRIGHT.COM  
DIRECT DIAL: (512) 536-3085

TELEPHONE: (512) 474-5201  
FACSIMILE: (512) 536-4598

December 18, 2003

CERTIFICATE OF MAILING 37 C.F.R. 1.8	
I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail in an envelope addressed to: MS DD, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date below:	
December 18, 2003	
Date	Robert E. Hanson

**MS DD**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

RE: *U.S. Patent Application No. 10/620,049 entitled "ANTIBODIES WITH INCREASED AFFINITIES FOR ANTHRAX ANTIGENS" – Barrett R. Harvey et al.*  
*Our reference: UTSB:721US*


Sir:

Enclosed for filing in the above-referenced patent application is an Information Disclosure Statement, Form PTO-1449, and references A1-A2, B1, and C1-C29.

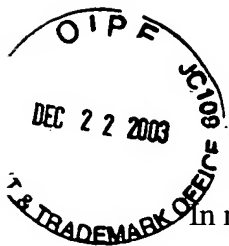
No fees are believed to be due in connection with the filing of this Information Disclosure Statement, however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to the enclosed materials, the Commissioner is authorized to deduct the appropriate fees from Fulbright & Jaworski Deposit Account No.: 50-1212/UTSB:721US.

Please date stamp and return the enclosed postcard evidencing receipt of these materials.

Respectfully submitted,

  
Robert E. Hanson  
Reg. No. 42,628

REH/kmv  
Encl.: as noted



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:  
Barrett R. Harvey *et al.*

Serial No.: 10/620,049

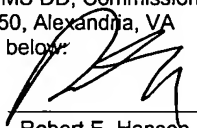
Filed: July 15, 2003

For: ANTIBODIES WITH INCREASED  
AFFINITIES FOR ANTHRAX ANTIGENS

Group Art Unit: 1653

Examiner: Unknown

Atty. Dkt. No.: UTSB:721US

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December 18, 2003	
Date	Robert E. Hanson

**INFORMATION DISCLOSURE STATEMENT**

MS DD  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56, it is respectfully requested that this Information Disclosure Statement be entered and the documents listed on attached Form PTO-1449 be considered by the Examiner and made of record. Copies of the listed documents required by 37 C.F.R. § 1.98(a)(2) are enclosed for the convenience of the Examiner.

In accordance with 37 C.F.R §§ 1.97(g), (h), this Information Disclosure Statement is not to be construed as a representation that a search has been made, and is not to be construed to be

an admission that the information cited is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

The present Information Disclosure Statement is being filed prior to the receipt of a first Official Action reflecting an examination on the merits, and hence is believed to be timely filed in accordance with 37 C.F.R. § 1.97(b). No fees are believed to be due in connection with the filing of this Information Disclosure Statement, however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to these materials, the Commissioner is authorized to deduct the appropriate fees from Fulbright & Jaworski Deposit Account No.: 50-1212/UTSB:721US.

Applicants respectfully request that the listed documents be made of record in the present case.

Respectfully submitted,



Robert E. Hanson  
Reg. No. 42,628  
Attorney for Applicants

FULBRIGHT & JAWORSKI L.L.P.  
600 Congress Avenue, Suite 2400  
Austin, Texas 78701  
(512) 474-5201

Date: December 18, 2003

Form PTO-1449 (modified)

Atty. Docket No.

Serial No.

UTSB:721US

10/620,049

List of Patents and Publications for Applicant's

Applicant

Barrett R. Harvey *et al.*

INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

Filing Date:

July 15, 2003

Gr up:

1653

U.S. Patent Documents

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Foreign Patent Documents

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Other Art

See Page 1

## U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date of App.
	A1	5,601,823 A	2/11/1997	Williams <i>et al.</i>	424	167.1	12/02/93
	A2	6,329,156 B1	12/11/01	Cirino <i>et al.</i>	435	7.21	03/22/99

## Foreign Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Translation Yes/No
	B1	WO 99/36569	01/20/99	PCT			

## Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C1	Bradley <i>et al.</i> , <i>Nature</i> , "Identification of the cellular receptor for anthrax toxin," 8;414(6860):225-229, 2001.
	C2	Bull and Parrich, "A binding contract for anthrax," <i>Science</i> , 297:201-202, 2002.
	C3	Chen and Okayama, "High-efficiency transformation of mammalian cells by plasmid DNA," <i>Mol. Cell Biol.</i> , 7(8):2745-2752, 1987.
	C4	Chen <i>et al.</i> , "Isolation of high-affinity ligand-binding proteins by periplasmic expression with cyto metric screening," <i>Nat. Biotechnol.</i> , 19:537-542, 2001.
	C5	Chen <i>et al.</i> , "In vitro scanning saturation mutagenesis of all the specificity determining residues in an antibody binding site," <i>Protein Eng.</i> , 12:349-356, 1999.
	C6	Daughterty <i>et al.</i> , "Quantitative analysis of the effect of the mutation frequency on the affinity maturation of antibodies," <i>Proc. Natl. Acad. Sci., USA</i> , 97:2029-2034, 2000.
	C7	Ezzell <i>et al.</i> , "Immunoelectrophoretic analysis, toxicity, and kinetics of in vitro production of the protective antigen and lethal factor components of <i>Bacillus anthracis</i> toxin," <i>Infect. Immun.</i> , 45:761-777, 1984.
	C8	Georgiou <i>et al.</i> , "Display of heterologous proteins on the surface of microorganisms: from the screening of combinatorial libraries to live recombinant vaccines," <i>Nat. Biotechnol.</i> , 15:29-34, 1997.

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Form PTO-1449 (modified)

Atty. Docket No.

Serial No.

UTSB:721US

10/620,049

List of Patents and Publications for Applicant's

INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

Applicant

Barrett R. Harvey *et al.*

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U.S. Patent Documents

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Foreign Patent Documents

See Page 1

Other Art

See Page 1

## Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C9	Hayhurst and Georgiou, "High throughput isolation," <i>Curr. Opin. Chem. Biol.</i> , 5:683-689, 2001.
	C10	Hayhurst and Harris, "Escherichia coli Skp chaperone coexpression improves solubility and phage display of single-chain antibody fragments," <i>Protein Expr. Purif.</i> , 15:336-343, 1999.
	C11	Hayhurst <i>et al.</i> , "Isolation and expression of recombinant antibody fragments to the biological warfare pathogen <i>Brucella melitensis</i> ," <i>J. Immunol. Methods</i> , 276:185-196, 2003.
	C12	Hayhurst, "Improved expression characteristics of single-chain Fv fragments when fused downstream of the Escherichia coli maltose-binding protein or upstream of a single immunoglobulin-constant domain," <i>Protein Expr. Purif.</i> , 18:1-10, 2000.
	C13	Hoess, "Protein design and phage display," <i>Chem. Rev.</i> , 101:3205-3218, 2001
	C14	Ivins <i>et al.</i> , "Influence of body weight on response of Fischer 344 rats to anthrax lethal toxin," <i>Applies and Environmental Microbiology</i> , 55:2098-2100, 1989.
	C15	Keller and Stiehm, "Passive immunity in prevention and treatment of infectious diseases," <i>Clin. Microbiol. Reviews</i> , 13:602-614, 2000.
	C16	Krebber <i>et al.</i> , "Reliable cloning of functional antibody variable domains from hybridomas and spleen cell repertoires employing a reengineered phage display system," <i>J. Immunol. Methods</i> , 201:35-55, 1997.
	C17	Leppla, "Anthrax toxin," Chapter 19 In: <i>Handbook of Experimental Pharmacology</i> , 145:445-472, 2000.
	C18	Li <i>et al.</i> , "X-ray snapshots of the maturation of an antibody response to a protein antigen," <i>Nat. Struct. Biol.</i> , 10(6):482-488, 2003.
	C19	Little <i>et al.</i> , "Characterization of lethal factor binding and cell receptor binding domains of protective antigen of <i>Bacillus anthracis</i> using monoclonal antibodies," <i>Microbiology</i> , 142:707-715, 1996.
	C20	Little <i>et al.</i> , "Passive protection by polyclonal antibodies against <i>Bacillus anthracis</i> infection in guinea pigs," <i>Infection and Immunity</i> , 65:5171-5175, 1997.
	C21	Little <i>et al.</i> , "Production and characterization of monoclonal antibodies to the protective antigen component of <i>Bacillus anthracis</i> toxin," <i>Infect. Immun.</i> , 56:1807-1813, 1988.

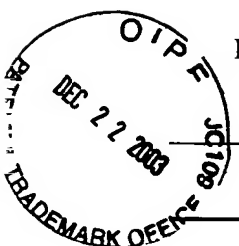
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Form PTO-1449 (modified)		Atty. Docket No. UTSB:721US	Serial No. 10/620,049
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant Barrett R. Harvey <i>et al.</i>	
		Filing Date: July 15, 2003	Group: 1653
U.S. Patent Documents <i>See Page 1</i>	Foreign Patent Documents <i>See Page 1</i>	Other Art <i>See Page 1</i>	



### Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C22	Maynard <i>et al.</i> , "Protection against anthrax toxin by recombinant antibody fragments correlates with antigen affinity," <i>Nat. Biotechnol.</i> , 20:597-601, 2002.
	C23	Mourez <i>et al.</i> , "Designing a polyvalent inhibitor of anthrax toxin," <i>Nature Biotechnology</i> , 19:958-961, 2001.
	C24	Pitt <i>et al.</i> , "In vitro correlate of immunity in a rabbit model of inhalational anthrax," <i>Vaccine</i> , 19:4768-4773, 2001.
	C25	Sellman <i>et al.</i> , "Dominant-negative mutants of a toxin subunit: an approach to therapy of anthrax," <i>Science</i> , 292:695-697, 2001.
	C26	Singh <i>et al.</i> , "A dominant negative mutant of Bacillus anthracis protective antigen inhibits anthrax toxin in vivo," <i>J. of Biol. Chem.</i> , 276:22090-22094, 2001.
	C27	Turnbill <i>et al.</i> , "Antibodies to Anthrax Toxin in Humans and Guinea Pigs and Their Relevance to Protective Immunity," Abstract, <i>Med. Microbiol. Immunol.</i> , 177:293-303, 1988.
	C28	U.S. Patent Application Serial Number 10/288,269, filed November 5, 2002 (UTSB:720US).
	C29	Wittrup, "The single cell as a microplate well," <i>Nat. Biotechnol.</i> , 18:1039-1040, 2000.

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